

TECHNICAL INFORMATION AND SERVICE DATA

RADIOLA

Models 535-GA and 535-GAZ

FIVE VALVE, ONE BAND

A.C. OPERATED SUPERHETERODYNES

ISSUED BY

AMALGAMATED WIRELESS (A/SIA.) LIMITED



ELECTRICAL SPECIFICATIONS

FREQUENCY RANGE 540-1600 Kc/s
(555-187.5 Metres)

INTERMEDIATE FREQUENCY 455 Kc/s

POWER SUPPLY RATING 200-260 volts, 50-60 C.P.S.
(Models are produced with other voltage and
frequency ratings.)

POWER CONSUMPTION Receiver—48 watts
Record Player—17 watts
DIAL LAMPS 6.3 volts, 0.25 Amp.
M.E.S.

VALVE COMPLEMENT:

- (1) 6BE6 Converter
- (2) 6AR7GT I.F. Amp., Det., A.V.C.
- (3) 6AU6 A.F. Amp.
- (4) 6AQ5 Output
- (5) 6X4 Rectifier.

LOUDSPEAKER:

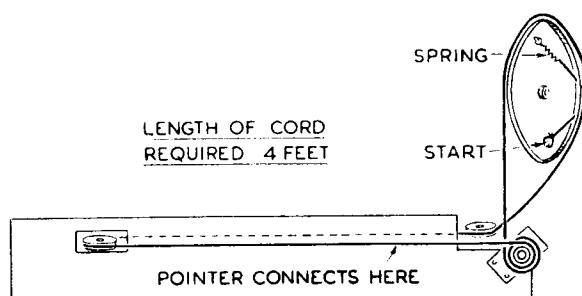
9" x 6" Permanent Magnet—Code No. BF11.

Transformer—TU301.

V.C. Impedance 3 ohms at 400 C.P.S.

Drive Cord Replacement.

The accompanying diagram shows the route of the cord and the method of attachment. The dial frame assembly must be removed before a new cord can be fitted.

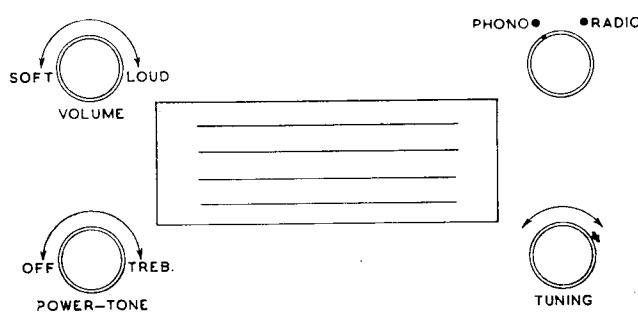


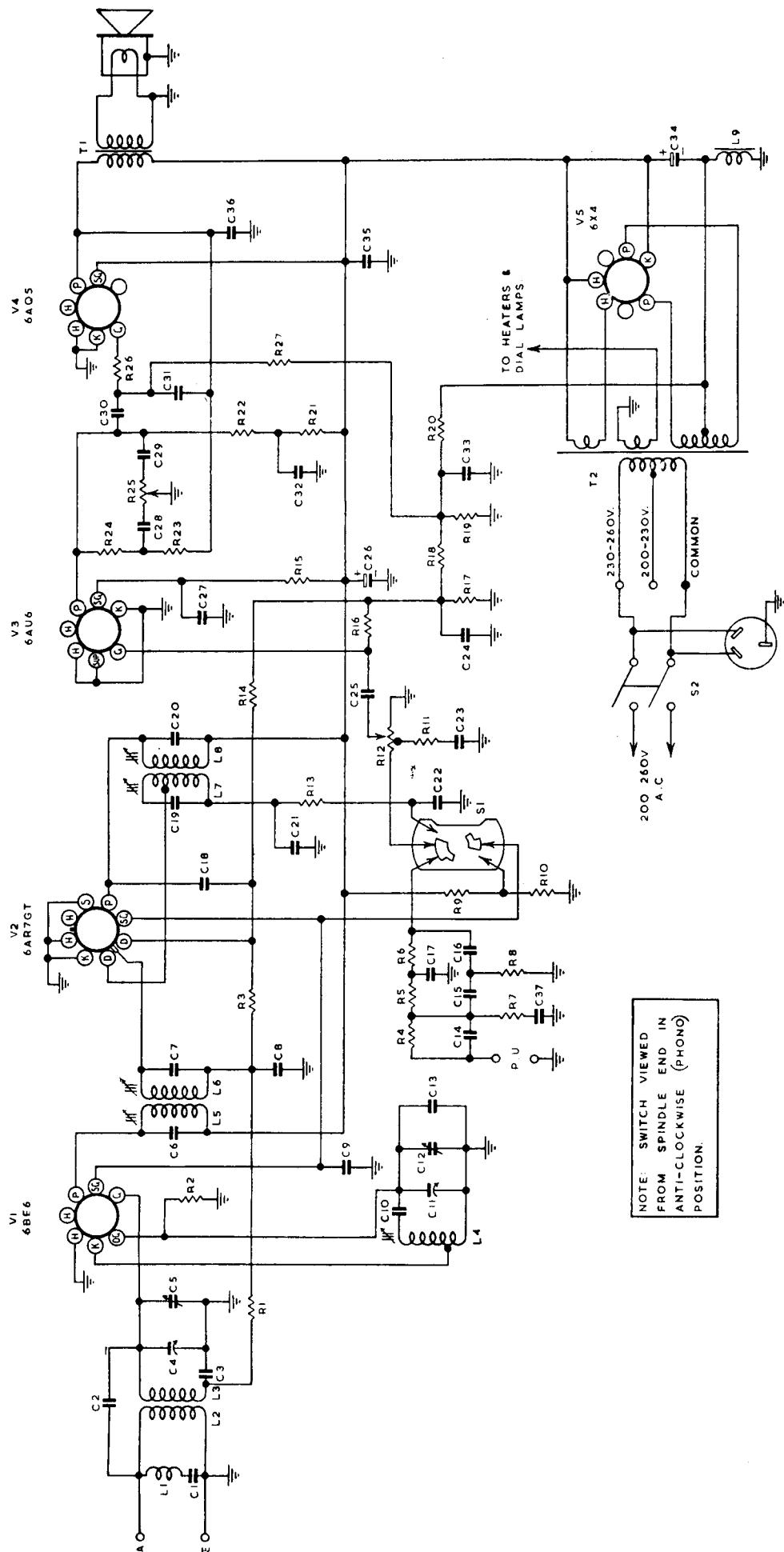
GENERAL DESCRIPTION.

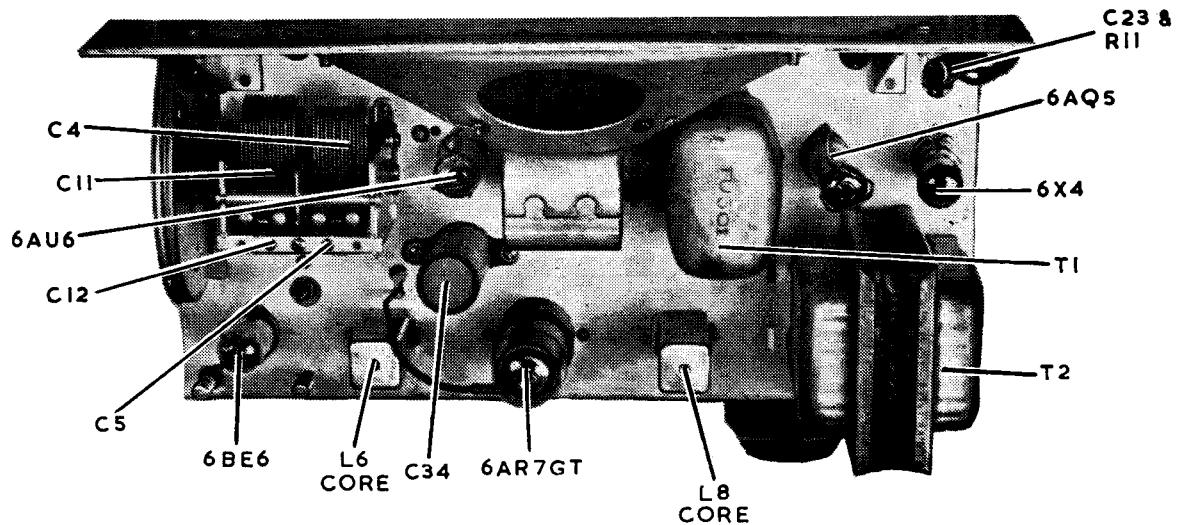
The models 535-GA and 535-GAZ are Table Radio-Phonograph combinations and features of their design include—Tropic-proof construction, automatic volume control, high permeability iron dust cores in I.F. transformers and oscillator coils, air-dielectric trimming capacitors, straight-line edge lighted perspex dial scales.

For the reproduction of phonograph recordings, Model 535-GA incorporates the Collaro electric phono-motor and pick-up unit, whilst Model 535-GAZ incorporates the A.W.A. electric phono-motor and pick-up unit.

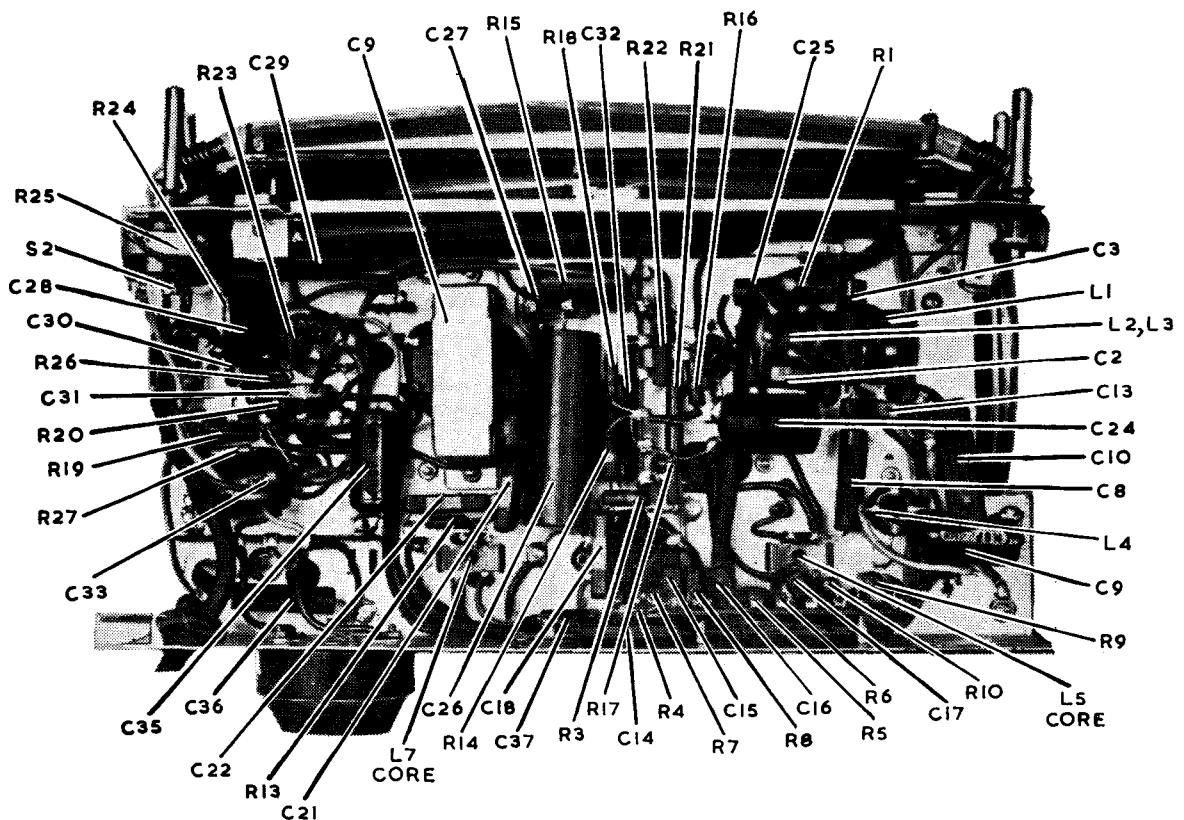
The Collaro and A.W.A. units are Rim Drive Constant Speed Units, which revolve the turntable at a constant speed for all recordings. They are available for both 50 C.P.S. and 40 C.P.S.



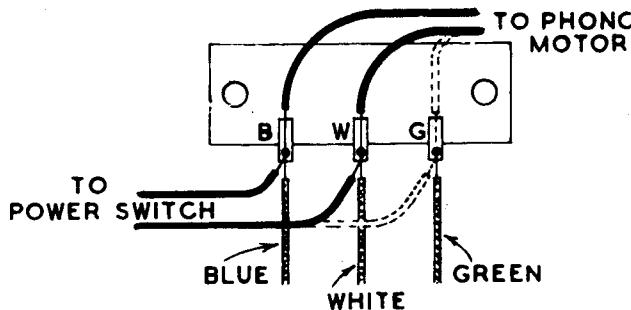




CHASSIS TOP VIEW MODEL 535-GA & 535-GAZ



CHASSIS UNDERNEATH VIEW MODEL 535-GA & 535-GAZ



Connection to Power Supply:

The receiver should not be connected to any circuit supplying other than alternating current from 200-260 volts and at the frequency stated on the label within the cabinet. The power supply connections are shown in the accompanying diagram.

Chassis Removal:

- (1) Remove the knobs by pulling them straight off their spindles.
- (2) Disconnect the Phono Motor and Pick-up cables.
- (3) Remove four screws from the top of the Phono-Motor board and withdraw the Phono Unit.
- (4) The chassis is held in the cabinet by four screws through the base. Removal of these enables the chassis to be withdrawn.

ALIGNMENT PROCEDURE.

Manufacturer's Setting of Adjustments.

The receiver is tested by the manufacturer with precision instruments and all adjusting screws are sealed. Re-alignment should be necessary only when components in tuned circuits are repaired or replaced, or, when it is found that the seals over the adjusting screws have been broken.

It is especially important that the adjustments should not be altered unless in association with the correct testing instruments listed below.

Under no circumstances should the plates of the ganged tuning capacitor be bent as the unit is accurately aligned during manufacture and cannot be re-adjusted unless by skilled operators using special equipment.

For all alignment operations, connect the "low" side of the signal generator to the receiver chassis and keep the generator output as low as possible to avoid A.V.C. action. Also, keep the volume control in the maximum clockwise position.

Testing Instruments.

- (1) A.W.A. Junior Signal Generator, type 2R3911, or
- (2) A.W.A. Modulated Oscillator, type J6726.
If the modulated oscillator is used, connect a 0.25 megohm non-inductive resistor across the output terminals of the instrument.
- (3) A.W.A. Output Meter, type 2M8832.

ALIGNMENT TABLE

Alignment Order	Connect "high" side of Generator to:	Tune Generator to:	Tune Receiver Dial to:	Adjust for maximum peak output.
1	Aerial Section of Gang (Rear portion)	455 Kc/s.	540 Kc/s.	L8 Core
2	Aerial Section of Gang (Rear portion)	455 Kc/s.	540 Kc/s.	L7 Core
3	Aerial Section of Gang (Rear Portion)	455 Kc/s.	540 Kc/s.	L6 Core
4	Aerial Section Gang (Rear portion)	455 Kc/s.	540 Kc/s.	L5 Core
Repeat the above adjustments until the maximum output is obtained.				
5	Aerial Terminal	600 Kc/s.	600 Kc/s.	L.F. Osc. Core Adj. (L4) *
6	Aerial Terminal	1500 Kc/s.	1500 Kc/s.	H.F. Osc. Adj. (C12)
7	Aerial Terminal	1500 Kc/s.	1500 Kc/s.	H.F. Aer. Adj. (C5)
Repeat adjustments 5, 6 and 7.				

* Rock the tuning control back and forth through the signal.

CIRCUIT CODE. RADIOLAS 535-GA & 535-GAZ

SOCKET VOLTAGES

VALVES		Bias Volts	Screen Grid to Chassis Volts	Anode to Chassis Volts	Anode Current mA	Heater Volts
6BE6	Converter	.....	— 2.0*	66	256	0.7
6AR7GT	I.F. Amp., Det. A.V.C.	.....	— 2.0*	66	256	2.7
6AU6	A.F. Amplifier	.....	— 2.0*	60	35	0.8
6AQ5	Output	.....	—15.0*	258	243	40
6X4	Rectifier (Cathode to centre top of transformer 300V)	—	—	—	290/290 A.C. R.M.S.	—
						6.3

Total H.T. current 58 mA.

* Cannot be measured with ordinary voltmeter.

Negative volts across smoothing choke (L9) 65 volts.
Measured at 240 volts A.C. supply. No signal input. Volume control maximum clockwise.
Voltmeter 1000 ohms per volt; measurements taken on highest scale giving accurate readable deflection.